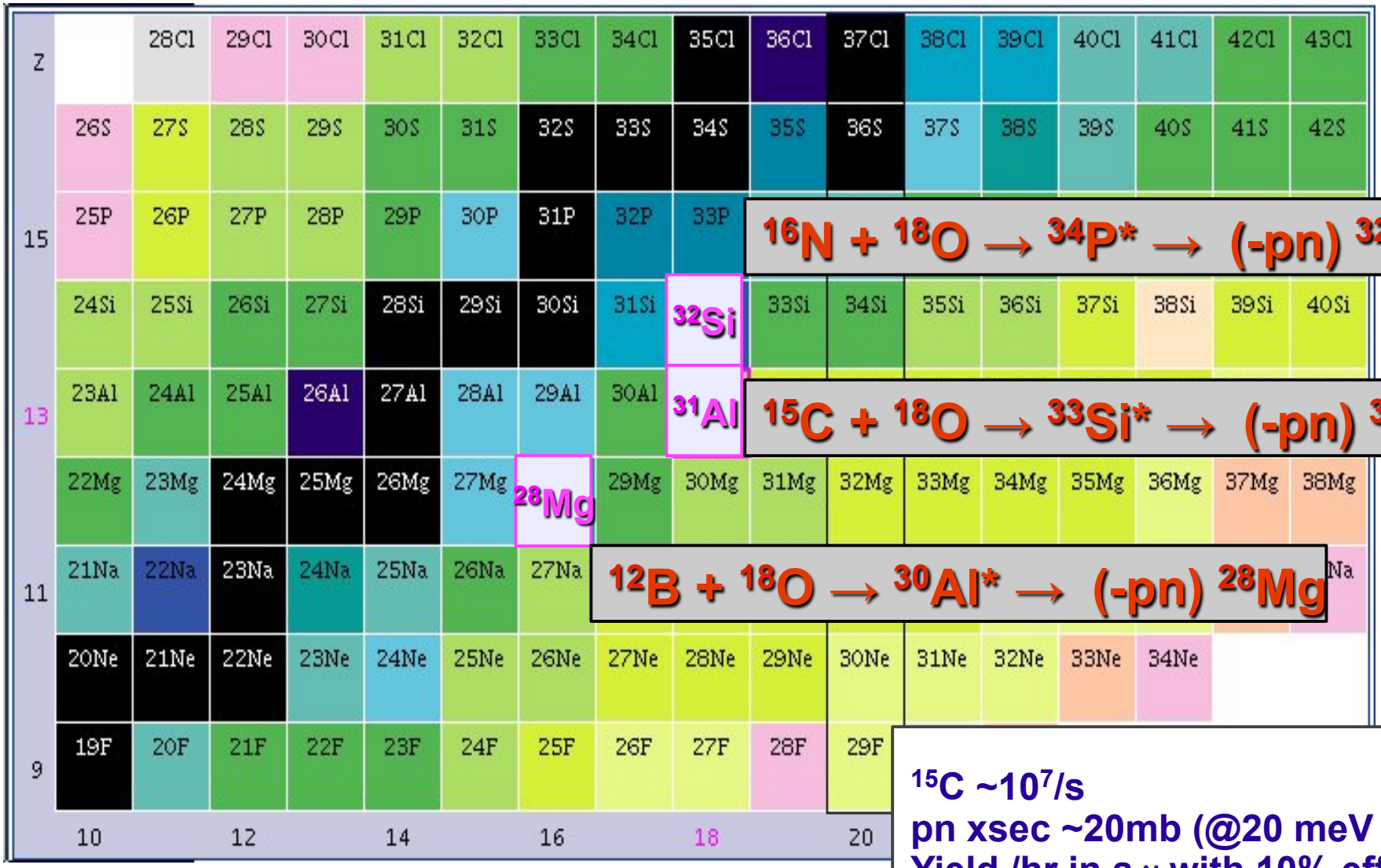
Nuclear Structure on the way to the drip line ….

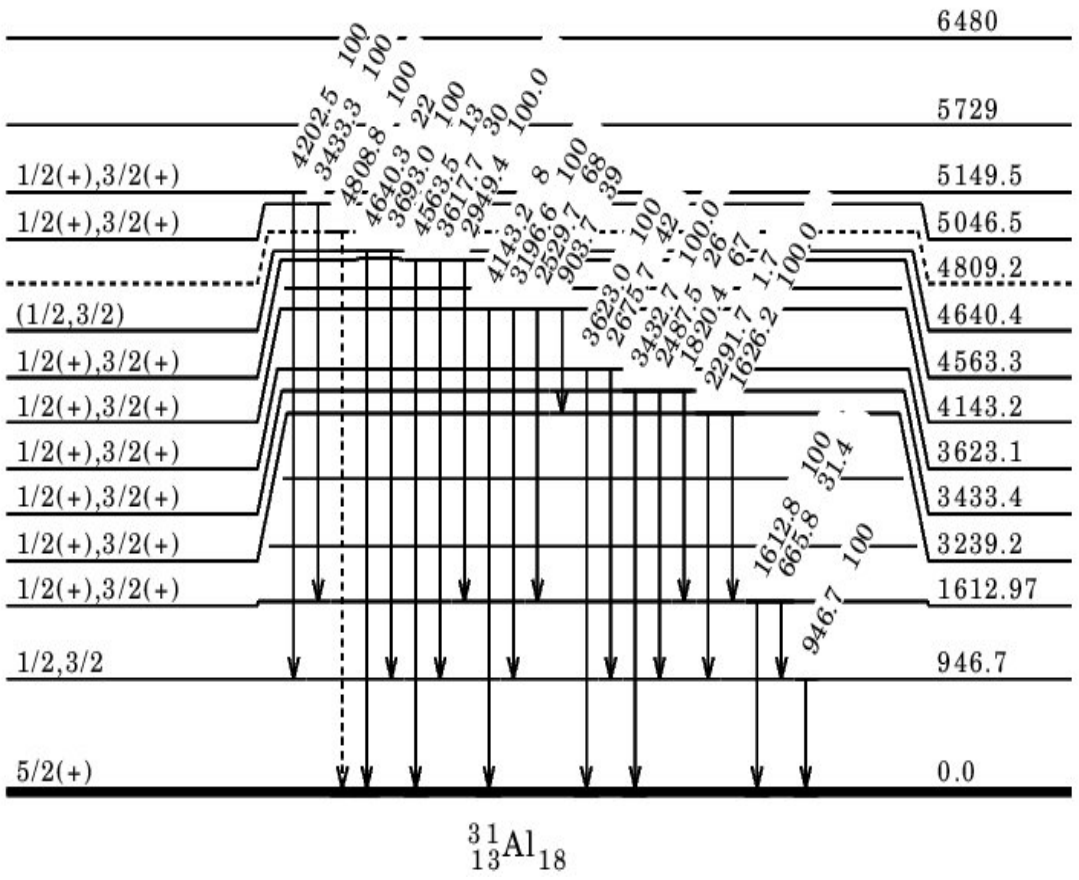


^{15}C ~10^7/s
pn xsec ~20mb (@20 meV from pace)
Yield /hr in a γ with 10% eff ~ 400
(assumed target 1mg/cm2)

Typical case: T_z = 5/2 ^{31}Al (from *pn* exit channel)

→ last neutrons filling the $d_{3/2}$ orbital
→ only low spin states known from β-decay
→ as in other T_z=5/2 nucleus (eg. ^{29}Mg)
negative parity states expected to occur at low excitation energy.

^{15}C (~10^7/s) + ^{18}O
+Gammasphere (Gretina)
+ Microball



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→ possibility to explore cross shell excitations: high sensitivity needed as the *pn* channel is ~3.5% as compared to the 80% (*2n*+*3n*)